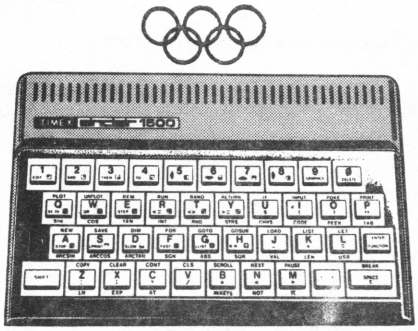

THE UNOFFICIAL T/S NEWSLETTER OF THE 1984 SUMMER OLYMPICS

# TIMELINEZ

Volume 2 Issue 8 August 1984 $1.00

LATEST T/S NEWS
MODEM REFERENCE GUIDE
HIDDEN WORD PUZZLES
USER GROUP EXCHANGE
JUNGLE JIM
2068 GRAPHICS S/W

## ** T/S UPDATE **

* TIMELINEZ has received a four page letter from Doug Dewey announcing the availability of a Spectrum Emulator for the 2068. This long awaited item should enable most of the Spectrum S/W to run on our computers. The Emulator comes in two versions: a 16K EPROM alone for $60 or the Emulator with 3 expansion slots (room for 3 more 16K EPROMS) for $80.

Doug is a long time member of the Triangle Sinclair Users Group in North Carolina and he is editor of their fine newsletter. We have ordered two Emulator boards from Doug for evaluation and we hope to have them available at all the local meetings in the near future. With all the Spectrum S/W available in England, this product should really breathe new life into the 2068.

For complete info. on the Spectrum Emulator contact: Doug Dewey, 206 James St., Carrboro, NC 27510 Phone: (919) 929-3079 before 9pm

* John Warburton at Sunset Electronics informs us that he will soon have two rare 2068 cartridges available: Flight Simulator ($29.88) and Pinball ($24.88). Flight has been sold out for some time and Pinball was never released by Timex. John also has several new books on machine language programming for the 1000/1500 and 2068.

* We have also learned that Timex sold all its H/W inventory and a large part of its S/W to a liquidator firm in New York. No news yet on how this might affect the Higgenbottom endeavor. Timex no longer has an 800 phone number, but a recording refers the caller to (203) 573-4883.

* Bill Miller reports that he has schematics available for the 2040 Printer ($.50/2 sheets) and 1500 Computer ($1.00/4 sheets). Please send legal SASE to: Bill Miller, 6675 Clifford Dr., Cupertino, CA 95014

(cont. 58)

## WESTRIDGE 2050 MODEM OPERATIONS

A REFERENCE GUIDE

MAIN MENU

A: AUTO-DIAL
X: HANG UP
SHFT/SP: TO MN MENU
S: SYSTEM SETUP
ENTER: TO TERMINAL MODE

TERMINAL MODE

C O N T R L: SHIFT/7
STOP: S (SEE PAGE 21
RESTART: Q FOR OTHER
???: C CNTRL CMMNDS)

TERMNL MENU: SHIFT/8
PRINT SCRN: P
CLEAR SCRN: C
TO MN MENU: M (DISCONNECTS)

MODM CMMNDS: SHIFT/ENTER
DIAL: Dxxxxxxx ENTER *
PICK UP: P ENTER **
MODEM: M ENTER -CNNCTS MDM
HANG UP: H ENTER

* E.G.: D2225555

** DISCNNCTS MODEM. PICK UP HANDSET FIRST!!

BY WDG JUNE 1984

**TIMELINEZ (c) is the joint publication of three Timex/Sinclair User Groups in the San Francisco / Oakland / San Jose Bay Areas. Old and new members are always welcome - so are experienced hardware and software hackers as well as beginners. Hope to see YOU at our next meeting.**

| | | | |
|---|---|---|---|
| **EBZUG** | **3rd. Thu.** | **8/16** | **9/20** |
| **PUG** | **3rd. Sun.** | **8/19** | **9/16** |
| **SVSTUG** | **Last Tue.** | **8/28** | **9/25** |

# HIDDEN WORD PUZZLE GENERATOR

by George Mockridge

The following program will let you make your own word puzzles that so many people find both entertaining and challenging. The fun is increased because you can choose your own words to be hidden as well as determining the size and shape of the puzzle. The challenge is increased because the words can be spelled in any of 8 directions (instead of the 4 directions in most ordinary puzzles).

The original version of this program was written in Microsoft Basic by author George Stewart and first appeared in the Dec. 1983 issue of POPULAR COMPUTING (with corrections in the March 1984 issue). Please refer to this article for a complete description of how the program works. It is quite complicated and ingenious.

A neighbor of mine named Jim Payne next converted it to run on his TI 99/4A computer and I worked from his version to make it run on the T/S 2068 computer and 2040 printer.

I went through about twenty rewrites to get everything operating correctly and I have tested the following printout pretty thoroughly. I am sure there is always room for improvement however, and I would be anxious to hear of any.

I did not find any reasons why the program could not also be modified to work on the TS 1000/1500. This would be a good project for someone and I would be glad to talk it over if anyone is interested.

As stated before, this program will let you customize your own word puzzles. You could create puzzles for birthday or Christmas gifts, get-well cards, thank-you notes, advertising messages, etc. The recipient not only gets the message, but a small personalized gift as well.

The puzzle pictured below is an example of a customized word puzzle. The message is for real. If you want a tape copy of this program, please send a $10 contribution to TIMLINEZ and I will see that you get one. I hope you will get a lot of use from the Word Puzzle Generator.

```
D P H R P G D E T C E L E S I W
X U Q U D R O W P A H W U O T S
C Z P U R C H A S E T N M A R A
E Z C M E M A D V E S P P I L A
U L Y Y C H M X Y E V E C X A U
I E T X F O G E T V A L W U D W
E L E C T R O N I C S C O I T P
C X G H A A E I A M D W Z S T D
E R I D K N O E N U K O Y C N H
R S O R H Y I V M G A G P A E A
```

The Answers Are Hidden In EIGHT Directions.

VERT. HORIZ. DIA. BACK. FOR.

THE HIDDEN WORDS ARE:

| | |
|---|---|
| SOLVE | THIS |
| WORD | PUZZLE |
| AND | RECEIVE |
| A | FREE |
| SELECTED | TAPE |
| WITH | ANY |
| PURCHASE | AT |
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```
  50 POKE 23658,8
  55 REM Remove line 50 if you
 want the hidden words to appear
 in small letters.  This will
 help in debugging program.
 100 CLS
 150 PRINT "            HIDDEN WOR
D"
 200 PRINT "         PUZZLE GENER
ATOR"
 250 PRINT
 300 PRINT
 350 PRINT
 400 INPUT "HOW MANY ROWS HIGH?
22 MAX. ";MR
 402 IF MR>22 THEN GO TO 400
 450 INPUT "HOW MANY COLUMNS WID
E? 16 MAX.";MC
 452 IF MC>16 THEN GO TO 450
 500 LET NC=MR*MC
 550 LET P$="-"
 600 LET K$="*"
 650 LET D$="+"
 700 LET NW=0
 750 DIM M$(MR,MC)
 800 DIM W$(50,16)
 825 DIM R(50,2)
 850 DIM D(8,2)
 900 DIM S(NC)
 950 DIM U(50)
1000 DIM O(50)
1700 CLS
2300 LET NW=0
2350 LET E=0
2400 LET NW=NW+1
2450 CLS
2452 PRINT "GRID SIZE IS ";MR;"
BY";MC
2454 PRINT "YOU HAVE HIDDEN ";NW
-1;" WORDS."
2456 PRINT "GRID IS ";INT (E/NC*
100);" % FULL."
2498 PRINT "PRESS ENTER WHEN FIN
ISHED."
2500 PRINT "ENTER WORD # ";NW
2525 IF NW>50 THEN PRINT : PRINT
 : PRINT "MAX.50 WORDS USED, PRE
SS ENTER."
2540 INPUT E$
2545 IF NW>50 AND E$="" THEN GO
TO 2700
2550 IF NW>50 AND E$<>"" THEN CL
S : PRINT AT 10,0;"YOU MAY NOT U
SE MORE THAN 50    WORDS.  RUN T
HE PROGRAM AGAIN.": STOP
2551 LET R(NW,1)=NW: LET R(NW,2)
=LEN E$
2552 LET R(NW,1)=NW: LET R(NW,2)
=LEN E$
2553 LET W$(NW)=E$
2554 LET E=E+LEN (E$)
2600 IF W$(NW,1)=" " THEN GO TO
2700
2650 GO TO 2400
2700 LET NW=NW-1
2750 FOR I=1 TO 8: READ D(I,1):
READ D(I,2): NEXT I
2800 DATA 0,1,1,1,1,1,0,1,-1,0,-1,
-1,-1,-1,0,-1,1,1
2905 LET EST=INT (((NC/100)*.6)+
(6.7↑(NC*(E/NC)/100+.6)))
2910 PRINT : PRINT "THE TIME IT
TAKES TO COMPLETE    THE PUZZLE W
ILL VARY WITH THE    SIZE OF THE
GRID AND THE # OF    WORDS USED.
 WARNING - TIME      INCREASES GR
EATLY FOR LARGER     GRIDS OVER 5
0% FULL."
2912 PRINT "EST. TIME OF THIS PU
ZZLE ";EST;" MIN."
2950 PRINT : PRINT "SETTING UP T
HE GRID, PLEASE WAIT"
3000 FOR I=1 TO MR: FOR J=1 TO M
C: LET M$(I,J)=P$: NEXT J: NEXT
I
3050 FOR I=1 TO NC: LET S(I)=0:
NEXT I
3100 RANDOMIZE
3150 FOR I=1 TO NC
3200 LET O=INT (RND*NC)+1: IF S(
O)<>0 THEN GO TO 3200
3250 LET S(O)=I
3300 NEXT I
3350 FOR I=1 TO NW: LET O(I)=0:
LET U(I)=0: NEXT I
3400 FOR I=1 TO NW-1
3402 LET J=I
3404 LET T1=R(I+1,1): LET T2=R(I
+1,2)
3406 IF T2<R(J,2) THEN GO TO 341
4
3408 LET R(J+1,2)=R(J,2): LET R(
J+1,1)=R(J,1)
3410 LET J=J-1
3412 IF J>=1 THEN GO TO 3406
3414 LET R(J+1,2)=T2: LET R(J+1,
1)=T1
3416 NEXT I
3560 FOR I=1 TO NW
3562 LET O(I)=R(I,1)
3564 NEXT I
3600 LET MF=0: LET WA=NW: LET FU
=0: LET DI=1
3650 PRINT : PRINT "STARTING TO
FILL IN THE GRID"
3652 PRINT
3700 FOR N=1 TO NC
3750 LET CP=S(N)
3800 LET CR=INT ((CP-1)/MC)+1: L
ET CC=CP-(CR-1)*MC
3850 IF M$(CR,CC)<>P$ THEN GO TO
 7000
3900 IF WA=0 THEN LET MF=0: GO T
O 6950
3950 LET M$(CR,CC)=K$
4000 LET DK=1
4050 LET IR=D(DI,1): LET IC=D(DI
,2)
4100 LET RT=1: IF IR<0 THEN LET
RT=MR
4150 IF IR=0 THEN LET RT=CR
4200 LET CT=1: IF IC<0 THEN LET
CT=MC
4250 IF IC=0 THEN LET CT=CC
4300 LET BR=CR: LET BC=CC
4350 IF (BR=RT AND IR<>0) OR (BC
=CT AND IC<>0) THEN GO TO 4600
4400 REM GOTO 1500
4450 LET BR=BR-IR
4500 LET BC=BC-IC
4550 GO TO 4350
4600 LET RT=1: IF IR>0 THEN LET
RT=MR
4650 IF IR=0 THEN LET RT=CR
4700 LET CT=1: IF IC>0 THEN LET
CT=MC
4750 IF IC=0 THEN LET CT=CC
4800 LET ER=CR: LET EC=CC
4850 IF (ER=RT AND IR<>0) OR (EC
=CT AND IC<>0) THEN GO TO 5050
4900 LET ER=ER+IR
4950 LET EC=EC+IC
5000 GO TO 4850
5050 LET UR=ER: IF BR>ER THEN LE
T UR=BR
5100 LET LR=BR: IF ER<BR THEN LE
T LR=ER
5150 LET UC=EC: IF BC>EC THEN LE
T UC=BC
5200 LET LC=BC: IF EC<BC THEN LE
T LC=EC
5250 LET PR=BR: LET PC=BC: LET X
$=""
5300 LET X$=X$+M$(PR,PC)
5350 LET PR=PR+IR: LET PC=PC+IC:
 IF PR>=LR AND PR<=UR AND PC>=LC
 AND PC<=UC THEN GO TO 5300
5400 LET PL=LEN (X$)
5452 LET QO=1
5454 LET Q$=X$
5456 LET R$=K$
5458 GO SUB 5462
5460 LET P=QF
5461 GO TO 5500
5462 LET QF=0
5464 IF LEN (R$)=0 THEN RETURN
5466 IF QO+LEN (R$)-1>LEN (Q$) T
HEN RETURN
5468 IF Q$(QO TO QO+LEN (R$)-1)=
R$ THEN GO TO 5474
5470 LET QO=QO+1
5472 GO TO 5466
5474 LET QF=QO
5476 RETURN
5500 FOR L=1 TO P: FOR R=PL TO P
 STEP -1
5550 LET C$=X$(L TO L+(R-L+1)-1)
: LET CL=LEN (C$)
5600 LET O=1
5650 LET W=O(O)
5700 FOR K=1 TO 15
5701 IF W$(W,K)<>" " THEN NEXT K
5702 IF K-1<>CL THEN LET MF=0: G
O TO 6750
5750 LET MF=1
5800 FOR C=1 TO CL
5850 IF C$(C)=P$ OR C$(C)=K$ THE
N GO TO 5950
5900 IF C$(C)<>W$(W,C) THEN LET
C=CL: LET MF=0
5950 NEXT C
6000 IF MF=0 THEN GO TO 6750
6050 LET F$=W$(W,1 TO C-1)
6100 IF L>1 THEN LET F$=D$+F$: L
ET L=L-1: GO TO 6100
6150 IF R<PL THEN LET F$=F$+D$:
LET R=R+1: GO TO 6150
6200 LET PR=1: LET R=BR: LET C=B
C
6250 LET Y$=F$(PR TO PR+1-1): IF
 Y$=D$ THEN GO TO 6350
6300 LET M$(R,C)=Y$
6350 IF (R=ER AND IR<>0) OR (C=E
C AND IC<>0) THEN GO TO 6450
6400 LET C=C+IC: LET R=R+IR: LET
 PR=PR+1: GO TO 6250
6450 IF O=WA THEN GO TO 6550
6500 FOR I=O TO WA-1: LET O(I)=O
(I+1): NEXT I
6550 LET WA=WA-1
6600 LET U(W)=1
6650 LET R=P: LET L=P: LET DK=8
6700 POKE 23692,255: PRINT "USED
 WORD ";NW-WA;"/";NW;" ";W$(W):
GO TO 6800
6750 LET O=O+1: IF O<=WA THEN GO
 TO 5650
6800 NEXT R: NEXT L
6850 LET DI=DI+1: LET DK=DK+1: I
F DI>8 THEN LET DI=1
6900 IF DK<=8 THEN GO TO 4050
6950 IF MF=0 THEN LET M$(CR,CC)=
CHR$ (INT (RND*26)+65): LET FU=F
U+1: POKE 23692,255: PRINT "USED
 A  FILL  CHAR. ";NC-N: GO TO 70
50
7000 PRINT "CELLS NOT YET EXAM.
";NC-N
7050 NEXT N
7098 BEEP 3,30
7100 CLS
7150 PRINT "    PUZZLE COMPLETED
"
7200 PRINT
7250 PRINT
7300 PRINT "PRINTER AND DISPLAY
SECTION"
7450 PRINT
7500 PRINT "WHERE DO YOU WISH TH
E "
7550 PRINT "       PUZZLE SENT ?"
7600 PRINT
7650 PRINT
7700 PRINT "(1)  SCREEN DISPLAY
ONLY"
7750 PRINT
7800 PRINT "(2)  SEND TO PRINTER
 ONLY"
7850 PRINT
7900 PRINT "(3)  DISPLAY ON SCRE
EN *AND*"
7950 PRINT "      SEND TO PRINTER
"
8000 PRINT
8050 PRINT "(ENTER 1,2 or 3)"
8100 PRINT
8150 INPUT A$
8200 IF A$="1" THEN GO TO 8400
8250 IF A$="2" THEN GO TO 8850
8300 IF A$="3" THEN GO TO 8400
8350 GO TO 8050
8400 CLS
8450 FOR T=1 TO MR
8550 PRINT M$(T,1 TO MC)
8750 NEXT T
8754 PRINT
8755 IF A$="1" THEN GO TO 9950
8850 FOR T=1 TO MR
8851 LET V$=""
8852 FOR C=1 TO MC
8854 LET V$=V$+M$(T,C)
8855 LET V$=V$+" "
8856 NEXT C
8858 LPRINT
8860 LPRINT V$
8862 NEXT T
8864 IF A$="2" THEN GO TO 9951
9950 PRINT "The Answers Are Hidd
en In EIGHT Directions."
9951 IF A$<>"1" THEN LPRINT : LP
RINT "The Answers Are Hidden In
EIGHT Directions."
9952 IF A$<>"2" THEN PRINT "VERT
. HORIZ. DIA. BACK. FOR."
9953 IF A$<>"1" THEN LPRINT : LP
RINT "VERT. HORIZ. DIA. BACK. FO
R."
9960 IF A$<>"2" THEN PRINT : PRI
NT "THE HIDDEN WORDS ARE:"
9961 IF A$<>"1" THEN LPRINT : LP
RINT "THE HIDDEN WORDS ARE:"
9962 IF A$<>"2" THEN PRINT
9963 IF A$<>"1" THEN LPRINT
9964 FOR I=1 TO NW
9966 IF U(I)<>0 THEN GO TO 9974
9970 NEXT I
9972 GO TO 9980
9974 IF A$<>"2" THEN PRINT W$(I)
;;
9975 IF A$<>"1" THEN LPRINT W$(I
);
9976 GO TO 9970
9980 PRINT
9981 IF A$<>"1" THEN LPRINT
9982 PRINT : PRINT "RETURN TO ME
NU? (Y OR N)"
9984 INPUT A$
9986 IF A$="Y" THEN GO TO 7100
9988 IF A$<>"N" THEN GO TO 9982
9990 STOP
9999 CLEAR : SAVE "WORD" LINE 50
```

(cont. from 55)

* Bill Ferrebee called us from West Virginia to say that he has set up the Rivercities Smart BBS for all T/S users. The service operates 24 hrs. / 7 days a week and sounds very impressive. Bill says he will send us more details for the next TIMELINEZ issue. Contact: Bill Ferrebee, 115 North 7th Ave., Paden City, WV 26159 Phone: (304) 652-1416.

* The latest issue of T-S Horizons (No. 6) has a review of Bob Orrfelt's WP32 wordprocessor written by Walt Gaby. Both are fellow Bay Area group members. T-S Horizons is becoming a very good T/S publication and the price is right at $12.00/year. Contact: T-S Horizons, Subscription Dept., 2002 Summit St., Portsmouth, OH 45662

* Sinclair Research sent us a press release saying that they will sell an initial 600 48K Spectrum computers to the computig and automation dept. of China's North East Technical College. The computers will be used by the dept.'s graduate researchers as an effective low-cost means of learning BASIC programming skills.

Commented Charles Cotton, head of Sinclair Research's export dept: "China is a very important potential market for us, and one in which we are investing considerable time and effort. This deal represents an important stepping stone to future opportunities".

* Sync Ware News is a new publication from Tom Woods which promises to be a "bi-monthly source of programs, hardware projects, and information exclusively for Sinclair and Timex computers". 1 yr (6 issues)/ $16.95. Contact: Sync Ware News, P.O. Box 64, Jefferson, NH 03583 Phone: (603) 586-7734.

* Two other publications, while not exclusively devoted to the T/S, do have sections dealing with our computers. You may wish to keep an eye out for them at you local newsdealer. The first is COMPTER TRADER MAGAZINE /$1.50 and the second is COMPUTER SHOPPER/$1.95.

The latter has a Sinclair Survivor's column written by Mark Fendrick. To join Mark on CompuServe use EMAIL to: 74216, 1245.

* Finally, TIMELINEZ has used up its backlog of articles with this issue. If we are to continue, we need to hear from you. Please share your knowledge with your fellow readers.

GM

**Membership Schedule**

**FULL (Newsletter and S/U Library privileges) $15/yr**

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**For more information contact:**

**PENINSULA USER GROUP**
**George Mockridge**
**263 Gateway No. 107**
**Pacifica, CA 94044**
**(415) 359-3198**

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**Rita Carr**
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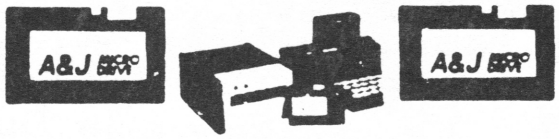


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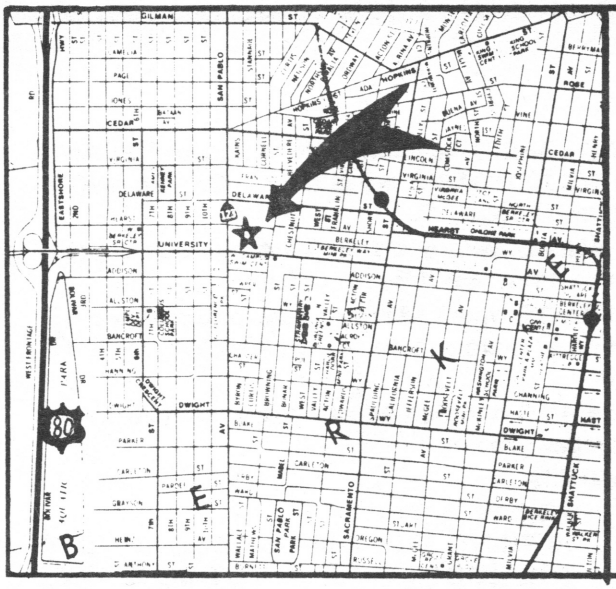



E B Z U G
East Bay Z80 User Group
654 40th Street
Richmond, CA 94805
(415) 234-3310 or 531-6566

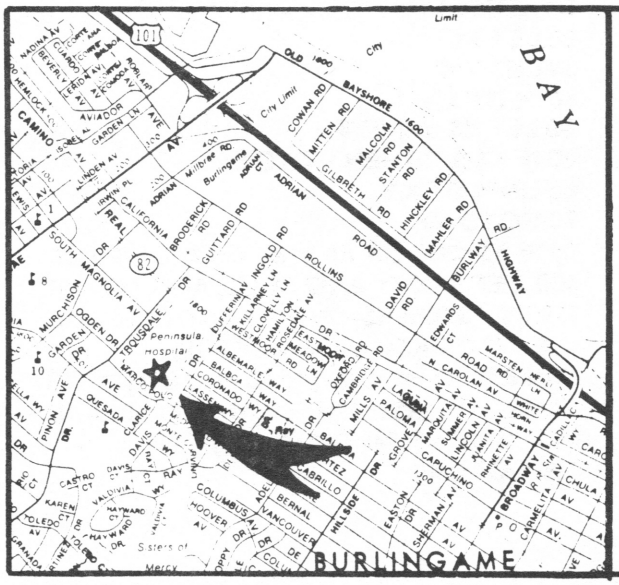
PRESIDENT — Joel Brody
NEWSLETTER EDITOR — Rick Link

EBZUG meets the third Thursday of each month at:

WEST BRANCH BERKELEY PUBLIC LIBRARY at the corner of University and San Pablo. Meetings start at 7:30 pm. Bring equipment and power strips.

UPCOMING MEETINGS:

AUGUST 16
SEPTEMBER 20

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263 Gateway No. 107
Pacifica, CA 94044
(415) 359-3198 or 333-2231

PRESIDENT — George Mockridge
LETTER EDITOR — Frank Moura

PUG meets the third Sunday of each month at:

PENINSULA HOSPITAL meeting room in basement. Bring equipment and extension cords if possible. Meetings start at 1 pm.

UPCOMING MEETINGS:

AUGUST 19
SEPTEMBER 16

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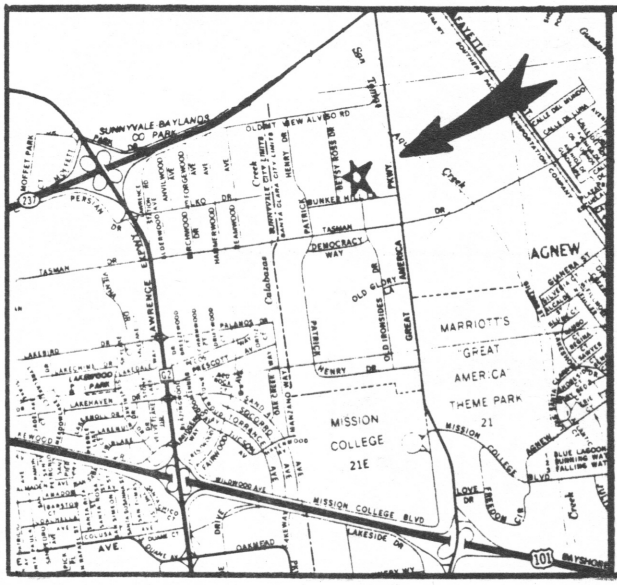


Silicon Valley SINCLAIR/TIMEX
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P.O. BOX 4133
Santa Clara, CA 95054-0133
(408) 738-2888 X4579

PRESIDENT — Rita Carr
NEWSLETTER EDITOR — Bill Miller

SVS/TUG meets the last Tuesday of each month at:

Dysan Corp. Headquarters
5201 Patrick Henry Drive
Santa Clara, CA

(Please use North entrance by the loading dock)

UPCOMING MEETINGS:

AUGUST 28
SEPTEMBER 25

# THE JUNGLE JIM

by
Jim March

Welcome to the TS1000 jungle! I will be your guide. My name is Jungle Jim. I come from a long line of computer apes so don't worry, I will get you there and back with a minimum of brain strain.

Today we trek to STRING ADDITION and the AND function. Good luck and good hunting!

**Addition of Strings** To add, or "concatenate," two strings, just place a + sign between them.

Example:

```
LET A$ = "NOW"
LET B$ = "IS"
LET C$ = A$ + "  " + B$
C$ = "NOW IS"
```

Addition can be used to input answers from the keyboard longer than one character.

Example:

```
10 LET A$ = INKEY$
12 IF A$ = "" THEN GOTO 10
15 PRINT A$;
20 IF INKEY$◇"" THEN GOTO 20
30 GO TO 10
```

Line 20 makes sure the user has lifted his/her fingers off the key (non-repeating keys). Taking out line 20 gives you repeating keys.

Another example:

```
LET X$="BIG" + "DOG"
PRINT X$
BIGDOG
```

**AND** BASIC Function (shift-"A", code=218). AND in T/S 1000 BASIC works differently than AND in other BASICs.

A AND B, where A and B are numeric expressions, returns A if B ≠ 0, or 0 if B = 0.

A$ AND B, where A$ is a string expression and B is a numeric expression, equals A$ if B ≠ 0, or "" if B = 0.

The AND function allows you to do some very compact coding.

Example:

```
5 SLOW
10 PRINT "USE THE 1-8 KEYS TO MOVE THE","DOT IN THE DIRECTION SHOWN BY","THE GRAPHICS CHARACTERS".
20 LET X=0
30 LET Y=0
40 PLOT X,Y
50 LET K$=INKEY$
60 IF K$◇"" THEN GOTO 80
65 UNPLOT X,Y
70 GOTO 40
80 IF K$ <"1" OR K$ >"8" THEN GOTO 65
100 LET X=X+(1 AND (X<63 AND (K$="2" OR K$="3" OR K$="8")))-(1 AND (X>0 AND (K$="1" OR K$="4" OR K$="5")))
110 LET Y=Y+(1 AND (Y<43 AND (K$="1" OR K$="2" OR K$="7")))-(1 AND (Y>0 AND (K$="3" or K$="4" OR K$="6")))
120 GOTO 40
```

Reprinted courtesy of The Book Company, Los Angeles, from the book "The Timex/Sinclair User's Encyclopedia" by G. Phillips and J. March, 1984.

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Copies of The Timex/Sinclair User's Encyclopedia are available from Jim March for $12.00, 3216 Partridge Ave., Oakland, CA., 94605 or from bookstores (including Stacey's in Palo Alto and San Francisco) for $14.95 plus tax.

---

From THE RAMTOP, newsletter of Greater Cleveland Area TSUG:

### TIPS ON TYPING IN 2068 PROGRAMS
By Darrell Geiger

When typing in published programs for the 2068 you must keep in mind that a program line can be entered wrong even though it reads exactly the same as the line being copied. Consider the line:

10 PRINT AT 6,15;"R"

The R in the above line can be typed in with the cursor in either the L mode or in the graphics G mode. If you are as innocent as I was you would probably type in the R usint the L cursor mode. If R is made into a user defined graphic character (see Chapter 18 of the 2068 User Manual) somewhere in the program, you can have trouble. If R has been entered using the L cursor mode, the R will print out as R when the program is RUN, but this might not be what is wanted. If R has been entered using the G mode, the user defined graphic will be printed out. The graphic symbol will appear in place of R when the program is brought back on to the screen after it has once been run. The lesson to learn is that if you are typing in a program for the 2068 you must study the program to determine if letters "A" to "U" should be typed in the L mode or in the G mode.

A second source of trouble occurs when typing in the graphic symbols found on the number keys 1 to 8 using the G cursor mode. If you are a little hazy about how to type these graphic symbols, you are apt to get into the INVERSE VIDEO mode part of the time. This won't keep you from making the string of graphics from looking exactly the way you want it to look, but the running of the program may be stopped by an error signal. In my particular case the error signal "K - Invalid color" came up further on the the program. This was puzzling since color did not seem involved. I had much trouble finding the fault. Keep in mind that if you get into the inversev video mode, the cursor mode symbol will not change to indicate it.

---

CONVERT YOUR CAI STRINGY FLOPPY TO STORE VARIABLES WITH THE BASIC PROGRAM JUST AS THE CASSETTE DOES

To convert your CAI interface so that variables will be saved along with the basic program

+ Check to see youhave ROM version 4.0

++ PEEK 12187 (2F9B HEX) = 16 (10 HEX)

++ PEEK 12188 (2F9C HEX) = 64 (40 HEX)

+ Change 12187 (2F9B HEX)
From 16 (10 HEX)
To 20 (14 HEX)

+ Call your new ROM
Ver 4.1 831024

If you feel uncomfortable making these modifications maybe another [illegible] member can help for a small fee.

If you are interested in helping to start [illegible] SIG contact me.

Bill Miller ART2405318

---

From John Petersen of South Bay Computer Club in Southern Calif.

*** NON-BREAKABLE PROGRAMS ***
2068 BACK-UP COPIES

1. MERGE " " - Stops Basic Program.
2. Add STOP statements.
3. Isolate the call-up command.
4. Finish LOADing program with commands in the Immediate mode.
5. Add SAVE statement - SCREEN$ are optional.
6. Try ,31000 for CODE reserved space. If program crashes during LOADing, increase size in increments of 1000.

***** MEAT-AX APPROACH *****

**BEFORE**

```
 5 CLEAR 30000
10 BORDER 1: PAPER 1: INK 1: CLS
20 POKE 23659,0: PRINT AT 22,0;;
25 FOR x=23232 TO 23263: POKE x,9:
   NEXT x
30 LOAD "s"CODE 16384
40 POKE 23659,0: PRINT AT 22,0;;
50 LOAD "p"CODE
60 PRINT USR 32768
```

**AFTER**

```
 5 CLEAR 30000
10 BORDER 1: PAPER 1: INK 1: CLS
25 FOR x=23232 to 23263: POKE x,9:
   NEXT x
50 LOAD "p"CODE
59 STOP
60 REM PRINT USR 32768
69 STOP
80 SAVE "p" LINE 5: SAVE "p"CODE
   30001,32000
99 STOP
```

---

HERE IS A "TRY-THIS" PROGRAM FOR THE T/S 2068 WHICH CONTAINS A ROUTINE (LINES 110 TO 170) DEVELOPED BY DAVID PERRY OF DONEGORE (NORTHERN IRELAND) THAT "PAINTS" OR "FILLS" CIRCLES.

ON YOUR FIRST RUN, CENTER THE X AND Y COORDINATES AND USE "50" FOR RADIUS AND "4" FOR THE COLOR KEY.

**********

```
 10 INPUT "X-COORDINATE? (0-255
)          (127 IS CENTER) ";X
 20 INPUT "Y-COORDINATE? (0-255
)          (87 IS CENTER) ";Y
 30 INPUT "RADIUS? ";R
 40 CIRCLE X,Y,R: PLOT X,Y
 50 INPUT "CHOOSE COLOR BY KEY
NUMBER ";C: INK C
110 FOR N=0 TO R
120 LET Z=R↑2: LET ZZ=N↑2
130 LET XX=SQR (Z-ZZ)
140 LET YY=Y+XX: LET XY=Y+XX
150 PLOT X+N,YY: DRAW 0,-XY
160 PLOT X-N,YY: DRAW 0,-XY
170 NEXT N
210 INK 0
220 CIRCLE X,Y,R-12
230 FOR G=11 TO 16
240 CIRCLE X,Y,R+G
250 NEXT G
310 PRINT AT 0,0;"X=";X;AT 1,0;
"Y=";Y;AT 2,0;"R=";R
320 PRINT AT 0,8;"COLOR KEY NO.
= ";C
330 PRINT AT 21,4;"HIT ANY KE
Y TO REPEAT"
340 PAUSE 0: CLS : GO TO 10
```

---

```
10 REM ************************
12 REM IN AND OUT OF CAPS MODE
       FROM WITHIN PROGRAM
          (FOR T/S 2068)
      See SYNTAX, March 1984
14 REM ************************
       EXAMPLE PROGRAM
      Walt Gaby, April 1984
16 REM ************************
20 POKE 23658,8
30 INPUT a$
35 FOR n=1 TO 5
40 PRINT a$
45 NEXT n
50 POKE 23658,0
60 INPUT b$
65 FOR n=1 TO 3
70 PRINT b$
75 NEXT n
80 GO TO 10
```

---

## The First Bug

It was the summer of 1945. The US Navy was rushing to finish Mark II, the first American large-scale digital computer. "It was a hot summer with no air conditioning, so all the windows were open," wrote Navy Captain Grace Hopper in the *Annals of the History of Computing*. "Mark II stopped, and we were trying to get her going. We finally found the relay that had failed. Inside the relay—and these were large relays—was a moth that had been beaten to death by the relay. We got a pair of tweezers. Very carefully we took the moth out of the relay, put it in the logbook, and put scotch tape over it. Now, Commander Howard Aiken had a habit of coming into the room and saying, 'Are you making any numbers?' From then on if we weren't making any numbers, we told him that we were debugging the computer. To the best of my knowledge that's where it started."

This logbook page, with the first computer bug still taped to it, is at the Naval Museum at the Naval Surface Weapons Center in Dahlgren, Virginia.

*—Art Kleiner*

*(Research help by Annette Jarvie and Kathy Parks)*

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# TIMELINEZ

## S/W REVIEW. A complete graphics package for the 2068. Documentation below. Avail. at Sunset Elect. $19.95.



• CANAAN-Software • PROUDLY PRESENTS • GRAFIST •

This program is a fun and easy to use tool. It's possibilities, are quite extensive, and range from a simple sketch pad to- complete GRAFIC DESIGNS, as well as VIDEO DISPLAYS and so on.

There are various modes, (which will be explained in detail) these include. Draw, TITLES, TEXT entry, DISPLAYS of TEXT or "PICTURES", saving & loading of grafic "files" setting PRINTER and so on.

One of the important features, are the 3 STORE/RECALL pages. These hold in memory, complete screens (colour H/R grafics TEXT, TITLES, etc, and can be used for any purpose, including ANIMATION or EDITING.

Following, are operating instructions for the various modes.

1-DRAW.. You can either use the JOYSTICK, or KEYS 1-8 (1-4 are for diagonal moves). To wipe out (erase), hold down the firing button on the joystick, or press key 0. If you use the keys, then you will have to press key 9 in order to return to normal drawing. The various sub modes and their keys, are displayed on the screen at all times.

Before the drawing is actually activated, (or at any time you wish), the colour options will be displayed. These will always follow in the same order of input, PAPER bright or normal, PAPER colour, FRAME, BRUSH, PEN, TITLES, CHARACTERS.

- BRUSH, is triple high resolution plotting, and therefore is slower then PEN.

C-chrctr.. you will be prompted for an input of any keyboard character including the grafics. Note.. do not enter more then 28 at one time, as screen may automatically scroll upwords. Chrctrs will be printed on the line of your last drawing position. Note.. FLASH applies only to these characters, and is turned on and of with key F.

E-erase.. will erase the entire screen (leaving the frame), and retaining all previous positions and colours or sub modes.

O-over will print or draw over without erasing, N-normal cancels O-over. M-menu exits the DRAW mode.

S-store.. You will be prompted for the page number (1-3) and the picture and frame will be stored in that page. This allows you for eg, to start a drawing in certain colours, store it, then experiment for a while, either cont storing, or recall the original and go on. Therefore, it is advisable, before any changes, to store the existing screen.

R-recall.. will of course recall any of the above mentioned pictures.

T-TITLE.. Titles will also be printed on last drawing line, however since these are of variable heights and widths, care should be taken when specifying their dimensions, as they erase everything in their path.

The TITLE mode can also be accessed seperately (MENU item 3), placed in storage and later recalled in DRAW mode before FRAMING or drawing over.

I-ink will return to the above mentioned colour prompts. Note.. We have included the "CHAMELEON" colour, which allows the PEN, BRUSH, TITLE, chrctr, etc to adopt the colour of its nearest plotting positions.

Z-CIRCLE.. after entering the diametor, the computer will automatically, draw a circle to the right of the last PLOTTING position, (unless your specified size is too large for that area)

X-move picture left. Y-move picture right.

These keys will scroll the picture sideways in the above directions. Assuming you have a drawing, and would like to erase the right side, every time you press X, the picture will move to the right, therefore erasing that side, and bringing the left side 1 step closer to the center.

NOTE.. all af the above mentioned "submodes" and features can be used individually or in any combination. Please experiment & "PLAY" for a while, before attempting to recreate the "MONA LISA". As you can see from the examples in the program, the possibilities for creating "GARBAGE" are also quite extensive.

MENU item 2-ENTER TEXT.

This mode is used for creating DISPLAYS (including TITLES), for VIDEO, (credits, advertising etc).

The regular text is automatically "PROCESSED" (WORD WRAPAROUND) etc. TITLES are entered at the same time, the difference being as follows.

1- Enter an asterik (symbl shift 8). 2- now enter your TITLE, (max 29 characters long). 3- Enter another asterik. The asteriks at the beginning and end of the titles, tell the computer (upon DISPLAY), that the text contained between them, should be enlarged and displayed in a seperate line and perhaps colour. To create a "proper" display, enter text and TITLES seperately.

When entering the TEXT (since the computer is in input, may we suggest.. that you onter every paragraph seperately. The "FILE" can hold aproximately 1100 characters including the ones used for TITLES. All files are automatically saved and loaded together with the 3 "PICTURE pages". Between entries of TEXT or TITLES, you can at any time, start from scratch or continue the TEXT in memory, which can be optionally displayed before new input. Note.. TEXT and TITLES can not be EDITED after entered, therefore Take care and do all your planning and editing while in input (" ").

REMINDER- every seperate input will be treated as a new prgrp

MENU item 6- DISPLAY/PRINT.

This of course will bring us to "the moment of trouth". Following will be 4 SUB MENU items.

1-VIEW (animate)- will display the 3 "PICTURES" every time you hit the key for that page (0 will exit that SUB mode). This can be affectively used for animation, and recorded on a VCR, as there are no prompts or any information displayed on the screen.

2-DISPLAY TEXT/TITLES- will do the same for the TEXT/TITLES and will automatically scroll up and repeat, until any key is pressed.

3- COPY pictures to printer- Will automatically printout the 3 pages, (TIMEX or CENTRONICS type DOT MATRIX printer.

4-TEXT/TITLES hard copy- will give you a printout to the above mentioned printers, but including LETTER QUALITY centronics interfaced printers.

5- Will return you to the main MENU.

MENU item 4- SET PRINTER .. you have to pass through this mode if you are using a CENTRONICS INTERFACE type PRINTER. This program includes a MC driver routine for most popular CENTRINICS printers.

MENU item 5- SAVE/LOAD- enter name of file (mark cassette label if you are saving).

This ends these instructions. As usual, this program is bug free, PLEASE TAKE YOUR TIME in discovering its uses.


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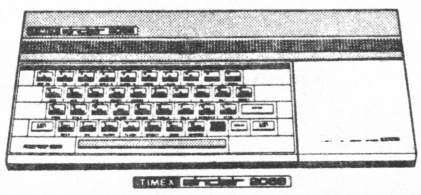
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